

REMARKS

Reconsideration of the above-referenced application is respectively requested in view of the above amendments and these remarks. In this Amendment, applicants have cancelled claims 4 and 5 and added new claims 16-19. Claims 1-3, 6-7, 9-11, 14-19 are pending.

In the Office Action, claims 1-5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent Application Publication No. 2004/0157609 to Jalloul et al. in view of United States Patent Application Publication No. 2002/0122392 to Elezabi. Claim 1 has been amended to overcome the rejection. Claims 4 and 5 have also been cancelled. In particular, claim 1 has been amended to state that the first path is for signals having a first encoded rate and the second path is for signals having a second encoded rate. Moreover, claim 1 has been amended to state that the first branch metrics utilizes a first encoding scheme and the second branch metrics utilizes a second encoding scheme.

The present invention is directed to providing a signal for use during soft handover when the communication unit receives signals having different encoding rates. This is achieved by a combiner that has as its inputs a first branch metrics that utilizes a first encoding scheme and a second branch metrics that utilizes a second encoding scheme. The combiner produces a combined branch metrics having both the first and second branch metrics. This combined branch metrics is utilized by the communication unit for soft handover.

Jalloul uses common control channels as a trigger for inter standard handoff. A soft handoff operation is initiated only at the same encoding rate. The same encoding rate is shown in Figure 5 with cell site 401 and cell site 402 having encoding rates R2. In addition, Figure 3 illustrates receiver 301 sending the received signals to first signal processing block 310 and second signal processing block 320. The rate is later only shifted in favor of another system. Since the data channels encoding rates from cell site 401 and cell site 402 are the same R2, they can be easily combined to enhance the received signals. Only one single encoding rate is used at a time. Jalloul does not disclose combining the signals that have different encoding rates.

Likewise, Elezabi does not address combining signals having different encoding rates. Elezabi is directed to overcoming multi-interference, which cancels or subtracts interference from the received signal instead of "combining" the received signal. This is a completely different cancellation concept. In Elezabi, interferences contain potentially different information and are subtracted from targeted signals. On the other hand, the signals of the present invention contain the same information and are combined to enhance the signal.

In view of the foregoing, it is respectfully submitted that the combination of Jalloul and Elezabi does not disclose, teach or otherwise suggest the combiner of claim 1 that combines first and second branch metrics having different encoding rates. Claim 1 is therefore not obvious in view of the cited references under Section 103(a). Applicant respectfully requests that this rejection as to claim 1 be withdrawn. As claims 2 and 3 depend upon and include the limitations of claim 1, it is respectfully submitted that Jalloul and Elezabi do not disclose, teach or otherwise suggest the subject of these claims for the reasons given above. Applicant respectfully requests that the rejection to claims 2 and 3 be withdrawn.

Claims 6, 7, 11 and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by United States patent No. 5,638,408 to Takaki. Applicant respectfully traverses this rejection. As stated above, the present invention is directed to combining a first branch metrics for symbols having a first encoding rate and a second branch metric having for symbols having a second encoding rate. Takaki is directed to different "data rates" while the present invention is directed to different "encoding rates." There is a difference between encoding rates and data rates. Takaki is directed to signals having different data rates, e.g. 9600 bps, 4800 bps, 2400 bps or 1200 bps, which are typical voice packets. As shown in Fig.3, block 104 of Takaki, there is only one convolutional encoder in the chain to form the four different data rates that is achieved by repetition block 105. For the present invention, there, however, would be four different encoders each with different encoder rates.

In addition, Takaki is for blind data rate determination in the voice application. This means that there is no combining, which is required by the rejected claims. Instead, Takaki has a selector with a comparison function as seen in block 3012 in FIG. 2. With

blind rate determination, fixed number of data rates are allowed to be used by the transmitter, for example the base station, and the receiver forms a set of hypothesis equal to the number of data rates used by the transmitter. When there are four data rates, only one of them is true. At the receiver, however, there is a need to test all four possible rates to pick one rate before final speech decoding. For the present invention, the opposite is true. In the present invention, all the signals have different encoding rates from different base stations present at the same time. Thus, the present invention combines the signals together with different encoding rates using a specific set of operations as described.

In view of the foregoing, it is respectfully submitted that Takaki does not disclose the combining the branch metrics for different encoding rates of the present invention. Claims 6, 7, 11 and 14 are therefore not anticipated by Takaki. Applicants respectfully request that the rejection under Section 102(b) be withdrawn.

In the Office Action, claims 9 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Takaki in view of Jalloul. Applicant respectfully traverses this rejection. Claims 9 depends upon claim 6 and claim 15 depends upon claim 11 and they include the limitations of claims upon which they depend. As stated above for claims 6 and 11, Takaki does not addresses combining signals with different encoding rates. As stated for claim 1, Jalloul also does not address combining signals with different encoding rates. Thus, the combination of Takaki and Jalloul do not disclose, teach or otherwise suggest the apparatus and method of claims 9 and 15, respectively. The rejected claims are therefore non-obvious. Applicants respectfully request that this rejection under Section 103(a) be withdrawn.

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Takaki. Claim 10 depends upon and includes the limitations of independent claim 6. For the reasons given above for claim 6, Takaki does not disclose, teach or otherwise suggest the invention in claim 10, which is therefore non-obvious. Applicants respectfully request that the rejection of claim 10 under Section 103(a) be withdrawn.

Applicants have added claims 16-19. Claims 16 and 17 depend upon claim 11 and state that the first and second branch metrics use a first and second convolutional encoding scheme. Claims 18 and 19 depend upon claim 1 and include the same subject matter as the other new claims. No new matter is entered by way of this new claims and

ample support is found on Page 5, lines 19-23 of the Specification. Allowance of these claims is requested for the reasons given above.

As the applicants have overcome all substantive rejections and objections given by the Examiner and have complied with all requests properly presented by the Examiner, the applicants contend that this Amendment, with the above discussion, overcomes the Examiner's objections to and rejections of the pending claims. Therefore, the applicants respectfully solicit allowance of the application. If the Examiner is of the opinion that any issues regarding the status of the claims remain after this response, the Examiner is invited to contact the undersigned representative to expedite resolution of the matter.

Respectfully submitted,
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